

PATENT COOPERATION TREATY
PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
 (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 306606		FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/US04/41096		International filing date (day/month/year) 08 December 2004 (08.12.2004)	
International Patent Classification (IPC) or national classification and IPC IPC(7): F21L 4/04 and US CI.: 362/202			
Applicant THE COLEMAN COMPANY, INC.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>7</u> sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 06 July 2005 (06.07.2005)		Date of completion of this report 18 January 2006 (18.01.2006)	
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer Sandra O'Shea Telephone No. (571) 272-2379	

Box No. I Basis of the report

1. With regard to the language, this report is based on:

the international application in the language in which it was filed.

a translation of the international application into English, which is the language of a translation furnished for the purposes of:

- international search (under Rules 12.3 and 23.1(b))
- publication of the international application (under Rule 12.4(a))
- international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished

the description:

pages 1-28 as originally filed/furnished
 pages* NONE received by this Authority on _____
 pages* NONE received by this Authority on _____

the claims:

pages NONE as originally filed/furnished
 pages* NONE as amended (together with any statement) under Article 19
 pages* 29-35 received by this Authority on 06 July 2005 (06.07.2005)
 pages* NONE received by this Authority on _____

the drawings:

pages 1/3-3/3 as originally filed/furnished
 pages* NONE received by this Authority on _____
 pages* NONE received by this Authority on _____

a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. The amendments have resulted in the cancellation of:

the description, pages _____
 the claims, Nos _____
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to the sequence listing (*specify*): _____

4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages _____
 the claims, Nos _____
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US04/41096

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>2-5, 7-8, 10, 13-16 and 17-26</u>	YES
	Claims <u>1, 6, 9, 11, 12</u>	NO
Inventive Step (IS)	Claims <u>10, 13-15, 17-26</u>	YES
	Claims <u>1-9, 11-12 and 16</u>	NO
Industrial Applicability (IA)	Claims <u>1-26</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and Explanations (Rule 70.7)

Claims 1, 6, 9, 11 and 12 lack novelty under PCT Article 33(2) as being anticipated by Perry. Perry teaches the claimed flashlight including the elliptical reflector. In response to Applicant's arguments, the shading in Fig. 1 indicates that the flashlight is curved. (Flashlights are generally curved anyway.) Please note that the lens is held by a holding ring 22, which has to be round. The cover glass or lens, 16, is located along the outer rim of the reflector. Perry discloses an elliptical reflector in the specification. Therefore, claim 1 is anticipated by Perry.

Claims 2, 4 and 5 lack an inventive step under PCT Article 33(3) as being obvious over Perry in view of Woodward. Perry does not teach the claimed beams or reflector. Woodward teaches that it is well known in the art to provide the reflector claim herein, which produces the claimed beam patterns. The rationale is to provide a beam pattern with a desired intensity at one point and width so that one can see. In view of the fact that this is the exact same problem that the applicant set out to solve, it would have been obvious to provide a reflector of Woodward in the apparatus of Perry for the reasons of producing a desired beam pattern to enhance visibility in low light conditions.

Claims 3 and 16 lack an inventive step under PCT Article 33(3) as being obvious over Perry in view of Ikeda et al. Perry does not disclose a leading edge having a central portion that extends out further than side portions or edges of left and right walls that are set back in a direction parallel with the axis and toward the light source more than outer leading edges of the upper and lower walls. Ikeda discloses these features in Fig. 1. The purposes are to improve the appearance of the lamp and improve the evenness of the brightness of the lamp. Since this reference solves the same type of problem the applicant intended to solve, it would have been obvious to combine the reflector of Ikeda et al. with the apparatus of Perry to promote the evenness of brightness at night.

Claim 5 lacks an inventive step under PCT Article 33(3) as being obvious over Perry in view of Caughlan. Perry does not teach a reflector with a lower wall extending downward more than a top wall so as to allow a portion of the light to be directed downward. Caughlan teaches this feature. See Fig. 2. The purpose is to improve the light distribution so that a person can see down the road. Since this reference solves the same type of problem the applicant was trying to solve, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the reflector of Caughlan in the apparatus of Perry to improve the light distribution down the road so that a person can see clearly.

Claims 7 and 8 lack an inventive step under PCT Article 33(3) as being obvious over Perry in view of Halasz et al. Perry does not disclose the protrusions that enable the flashlight to be supported on its reflector. Halasz et al. discloses this feature in Fig. 2. (The corners adjacent to the reflector are the protrusions.) The rational for this purpose is the ability to stabilize a flashlight horizontally on the table so that the user's hands are free to do something else. Since this is the same type of problem the applicant intended to solve, it would have been obvious to use the protrusions of Halasz et al. in the apparatus of Perry to stabilize the apparatus.

Claims 10, 13-15 and 17-26 meet the criteria set out in PCT Article 33(2) and 33(3) because the prior art does not teach or fairly suggest the particular reflector configurations claimed therein.

Claims 1-26 meet the criteria set out in PCT Article 33(4), because the configurations claimed therein are useful for flashlights.

----- NEW CITATIONS -----

WHAT IS CLAIMED IS:

1. A portable light, comprising:
 - a light source;
 - a power source for powering the light source;
 - an elliptical reflector for broadcasting a beam from the light source and having an outer rim, the outer rim of the elliptical reflector being curved; and
 - a curved lens mounted along the outer rim of the reflector.
2. The portable light of claim 1, wherein the reflector is configured and arranged to provide a small, concentrated beam of light and an outer, elliptical flood beam.
3. The portable light of claim 1, wherein the reflector comprises a leading edge having a central portion that extends out further than side portions.
4. The portable light of claim 1, wherein the reflector is configured and arranged to provide a light pattern in which a primary beam of light is directed straight out from the reflector, and additional light is directed more downward from the reflector than upward.

5. The portable light of claim 4, wherein a lower wall of the reflector extends downward more than a top wall so as to allow a portion of the light to be directed downward.

6. The portable light of claim 1, wherein the portable light is a flashlight.

7. The portable light of claim 6, wherein the flashlight is configured to be supported upright on a surface with an outer portion of flashlight adjacent the reflector engaging the surface.

8. The portable light of claim 7, wherein the the outer portion of the flashlight comprises protrusions for engaging the surface.

9. The portable light of claim 1, wherein a top wall of the reflector is downwardly concave relative to an interior of the reflector, and a lower wall is upwardly concave relative to the interior.

10. A portable light, comprising:

a light source;

a power source for powering the light source;

an elliptical reflector for broadcasting a beam from the light source and having an outer rim, a top wall, a bottom wall, a left wall, and a right wall, the outer rim of the elliptical reflector being curved, the top wall of the reflector being downwardly concave relative to an interior of the reflector, and the lower wall is upwardly concave relative to the interior, and the left wall and a right wall being shaped as a curve outwardly convex to the interior; and

a curved lens mounted on the reflector

11. The portable light of claim 1, wherein the reflector comprises an upper wall, a lower wall, a right wall and a left wall, and wherein the upper wall and lower wall are spaced so as to constrain light emanating from the reflector in a first dimension and the left wall and right wall are spaced and arranged so as to broadcast light emanating from the reflector in a second dimension.

12. The portable light of claim 11, wherein the portable light is arrangeable so the first dimension is vertical, and the second dimension is horizontal.

13. A portable light, comprising:

- a light source;
- a power source for powering the light source;
- an elliptical reflector for broadcasting a beam from the light source and having an outer rim, the outer rim of the elliptical reflector being curved, the elliptical reflector having an upper wall, a lower wall, a right wall and a left wall, and wherein the upper wall and lower wall are spaced so as to constrain light emanating from the reflector in a first dimension and the left wall and right wall are spaced and arranged so as to broadcast light emanating from the reflector in a second dimension and at least 140 degrees; and
- a curved lens mounted on the reflector.

14. The portable light of claim 13, wherein the left wall and right wall are spaced and arranged so as to broadcast light at least 160 degrees.

15. The portable light of claim 14, wherein the left wall and right wall are spaced and arranged so as to broadcast light at least 180 degrees.

16. The portable light of claim 11, further comprising:
a light source in the elliptical reflector; and
an axis extending through the elliptical reflector and
aligned along a direction of light emanating from the light
source out of the elliptical reflector;

wherein outer leading edges of the left and right walls
are set back in a direction parallel with the axis and toward
the light source more than outer leading edges of the upper
and lower walls.

17. The portable light of claim 16, wherein the right
and left walls each comprise a concave cupped inner surface
extending from the light source outward and at least a portion
of which does not extend to the outer edges of the upper and
lower walls.

18. The portable light of claim 17, wherein the concave
cupped inner surface extends outward to an outer portion of
the right and left walls.

19. The portable light of claim 17, wherein the concave
cupped inner surface is arranged and configured to provide a

small, concentrated beam of light, and other portions of the elliptical reflector provide an outer, elliptical flood beam.

20. The portable light of claim 19, wherein the cupped inner surface is more reflective than the other portions.

21. The portable light of claim 20, wherein the cupped inner surface is polished.

22. A portable light, comprising:
a light source;
a power source for powering the light source;
an elliptical reflector for broadcasting a beam from the light source and having an outer rim, the outer rim of the elliptical reflector being curved, the elliptical reflector having an upper wall, a lower wall, a right wall and a left wall, and wherein the upper wall and lower wall are spaced so as to constrain light emanating from the reflector in a first dimension and the left wall and right wall are spaced and arranged so as to broadcast light emanating from the reflector in a second dimension, and wherein the right and left walls each comprise a concave cupped inner surface extending from the light source outward and at least a portion of which does

PCT/US04/41096 24082005

not extend to the outer edges of the upper and lower walls;

and

a curved lens mounted on the reflector.

23. The portable light of claim 22, wherein the concave cupped inner surface extends outward to an outer portion of the right and left walls.

24. The portable light of claim 22, wherein the concave cupped inner surface is arranged and configured to provide a small, concentrated beam of light, and other portions of the elliptical reflector provide an outer, elliptical flood beam.

25. The portable light of claim 24, wherein the cupped inner surface is more reflective than the other portions.

26. The portable light of claim 25, wherein the cupped inner surface is polished.

-25-
34/1